Forestry – a fascinating topic and a hugely rewarding career

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Veteran trees; their importance and management

Fungal brackets of the *Ganoderma* genus, helping to recycle the nutrients locked up in the wood of this beech tree. This in turn creates a valuable wood decay habitat for a range of wildlife species (© Brian Muelaner)

Ancient and veteran trees

The terms 'ancient' and 'veteran' tree instantly conjure up an image in the mind's eye: Wonderful gnarly trees which have stood the test of time providing stability in an otherwise ever-changing landscape. They are full of character, decaying wood and play host to a wide range of wildlife.

But what is the difference between the two and how do we recognise them?

In the past the terms ancient and veteran have been used interchangeably, causing some confusion. For clarity below is a definition of each:

Ancient – A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species. Typical characteristics of an ancient tree are: a retrenching crown or a crown that has 'grown downwards', a trunk with a large girth and a trunk which is hollow or hollowing.

Veteran – A tree that is of interest biologically, culturally or aesthetically because of its age, size or condition. In relation to wildlife habitat, a Veteran tree is a survivor that has developed some of the features found on an Ancient tree, not necessarily as a consequence of time, but of its life or environment.

By virtue of their age and condition, all ancient trees are veterans, but not all veterans are old enough to be ancient.

The value of ancient and veteran trees

Ancient and veteran trees provide an immense range of values and should be cherished for the irreplaceable benefits they offer to our landscape.

They link us to our past; most are several hundred years old but a few may be a thousand or more years old. These trees may have borne witness to historic events such as the sealing of the Magna Carta or provided inspiration to writers including Shakespeare and Wordsworth, whilst others have been visited by historical figures like Henry VIII or the legendary Robin Hood.

Major oak, Sherwood Forest. Reputed to be the hiding place of Robin Hood (© Brian Muelaner)

They tell us about past land usage, which has changed dramatically in the last few hundred years, but where these trees persist they provide hints of historic landscapes. Worked trees, such as pollards, show the importance of these trees to local people in times gone by, indeed they were often vital for their very survival.

They host a diverse array of wildlife.

Decaying wood habitat, once commonplace, is becoming more threatened. This decaying wood is the basis

for an entire ecosystem including huge numbers of fungi, invertebrates, lichen, liverworts, mosses, birds, mammals, reptiles and amphibians to name a few.

Management of veteran trees
In this section, for simplicity, the term veteran will be used to describe both ancient and veteran trees. The overall aim of all veteran tree management should seek to achieve 'no avoidable loss of veteran trees'. To achieve this, we need to ensure that trees are kept alive for as long as possible and that the wide range of values they offer are maintained or, if possible, enhanced.


Does anything need to be done? Natural processes should be enough to keep this tree growing for years to come (© Brian Muelaner)

The management of veteran trees is a complex and dynamic topic. When managing any veteran tree it is important to treat the tree as an individual and manage according to its specific needs. Assess any actual or potential threats to the tree, and then tailor management to suit the requirements of the individual; just because one veteran tree has been managed in one way doesn't mean that they should all be managed in the same manner.

Three questions can help guide the veteran tree management process; starting at number one and only moving onto the next question when the first doesn't resolve the issue.

1. Does anything need to be done?
It may not be necessary to do anything. When undertaking any management there should be a clear need for intervention. Without this, it is not possible to assess the effectiveness of management and poorly thought out management may be of detriment to the tree.

Veteran trees have already survived for a long period of time. Left to their own devices they may be able to grow for many more.

2. Does the land around the tree need managing?
Threats to veteran trees often arise from the land surrounding the tree. Common examples include excessive shade cast by young regeneration or damage caused to the root and soil environment by compaction or addition of chemicals such as artificial fertilizers or pesticides.


Does the land around the tree need managing? These veteran oak trees were killed by excessive shading (© Brian Muelaner)

Shade cast by young regeneration can be removed by felling the young trees. The source of damage to the soil can be removed by setting up a root protection area. For more information, see the VETtree videos on the Ancient Tree Forum website for more info on these topics (link below).

3. Does the veteran tree need managing?
This should be the last option, and only employed when the threats are not addressed during steps 1 and 2. It is difficult to prescribe generic management recommendations here, as each tree and situation is different. You should seek help from a veteran tree specialist should there be a need to manage a veteran tree to ensure management recommendations are appropriate and don't cause damage to the tree.

Further guidance and training
The above provides some initial thinking points regarding veteran tree management. Further information can be obtained from the Ancient Tree Forum website. Available resources include: comprehensive handbooks on veteran tree management and short videos tackling key management problems.

Visit www.ancienttreeforum.co.uk for more information.

The Ancient Tree Forum also runs courses on Valuing and Managing Veteran Trees. A one-day course is offered for anyone who is involved in veteran tree management or has an interest in veteran trees, from the veteran tree enthusiast to professional arboriculturists and foresters. Where individuals want to move on to teach others about veteran trees, a three-day course has been designed to provide individuals with the skills and resources to teach the one-day course themselves. See the Ancient Tree Forum website for the 2018 training programme.

About the Ancient Tree Forum
The Ancient Tree Forum champions the biological, cultural and historic value of Britain's ancient and veteran trees, and provides advice on their value and management. To find out more, visit our website or sign up to our newsletter at www.ancienttreeforum.co.uk

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Update on Tree Health

Dr Ana Pérez-Sierra from Forest Research describes some of the latest diseases affecting trees in Britain

Canker caused by *Cryphonectria parasitica* on sweet chestnut with the characteristic epicormic growth below the canker
(© Forestry Commission)

The Tree Health Diagnostic and Advisory Service (THDAS)[1] at Forest Research is helping to diagnose, monitor and provide advice about the general health of the nation's trees, woodlands and forests, working on common diseases as well as on new threats. Although our last five years have been dominated by Chalara[2] ash dieback caused by the fungus *Hymenocyphus fraxineus*, we are also working on a few new diseases that have been recently detected in Britain.

Sweet chestnut blight
Sweet chestnut blight[3] is a disease caused by the fungus *Cryphonectria parasitica*. It was first identified in the UK (southern England) in 2011 and it was eradicated. Unfortunately, the disease was detected at the end of 2016 in western England and in 2017 in east London. The fungus affects the bark of sweet chestnut and enters through fissures or wounds. Stems or branches are girdled by lesions and die. The dead bark becomes visible as a sunken canker and epicormic growth might be observed below the cankered area. This pathogen has caused severe epidemics of American sweet chestnut (*Castanea dentata*) in North America and European sweet chestnut (*C. sativa*) in continental Europe.

Sirococcus blight of cedars
Since 2013 Atlas cedars have been suffering from severe shoot blight, cankers and defoliation in Britain caused by the fungus *Sirococcus tsugae*[4]. In the spring, affected trees display dead needles on the shoots which show a characteristic 'pink' colour; this is very distinctive in Blue Atlas cedar. The fungus can cause up to 70% defoliation and if the cankers affect the main stem (and it is girdled), the tree might die. We have had only a few reports of young trees dying although some affected trees have been removed because they are unsightly. There are no effective control measures for the disease. While good

Shoot blight on *Cedrus atlantica* caused by *Sirococcus tsugae* (© Forestry Commission)

Protection Organization) Reporting Service as a new emerging disease[6]. Since 2015 the number of confirmed cases in different *Abies spp*. has increased.

The management or control of tree diseases is greatly helped by early detection and prompt action. For this reason we encourage the report of these and any other tree health concerns through Tree Alert[7].

You can find out more about the work of Forest Research, including their research on pests and diseases, on their website[8].

Links

1 http://www.forestry.gov.uk/fr/infd-5uwey6
2 http://www.forestry.gov.uk/chalara
3 http://www.forestry.gov.uk/chestnutblight
4 http://www.forestry.gov.uk/fr/sirococcus
5 http://www.forestry.gov.uk/fr/neonectria
6 https://gd.eppo.int/reporting/article-2696
7 http://www.forestry.gov.uk/treealert
8 https://www.forestry.gov.uk/forestresearch

hygiene may reduce the spread of the disease, the fungus is dispersed by rain splash and strong winds are likely to disperse it over longer distances. This fungus can also affect other cedar species and hemlocks.

Neonectria Canker of fir

In 2015, fir trees (*Abies* spp.) showing dead shoots and branches, cankers and heavy resin flow were reported to THDAS. The fungus *Neonectria neomacrospora*[5] was identified as the cause. Although records of this disease go back more than 100 years in Europe, it was in 2008 that a new and severe canker disease of firs caused by this fungus was reported in Norway. In 2011, the same disease was reported in Denmark and, in 2013, it was included in EPPO (European Plant

Shoot and branch dieback on fir caused by *Neonectria neomacrospora* (© Forestry Commission)

The orchard habitat

Steve Oram, Orchard Biodiversity Officer, PTES

People's Trust for Endangered Species is working closely with orchard owners, groups and projects across the UK because of their significant value to wildlife. The unique way fruit trees age creates an indispensable habitat for a wide range of rare and interesting species, including various priority species, such as the noble chafer beetle and many others classed as nationally rare or scarce. This is because orchards comprise several different habitats, incorporating elements of woodland edge, meadow grassland, hedgerows, and wood pasture. This hosts a diverse flora of specialised plants such as fungi, mosses, liverworts and lichens through to veteran hedgerow trees, supporting an array of insect, bird, bat and mammal life. Other beneficial characteristics are that orchard soils are rarely ploughed or disturbed. There's little, if any, chemical use; dead wood and rot holes in ageing fruit trees provide nest and roost sites; they provide a great nectar and pollen source in late spring; and an abundance of fruit forage in the autumn

and winter. In short, they provide food and refuge for species that are in decline and struggling to survive in an ever-intensified farmed and urban landscape.

Orchard decline

PTES created and maintains the official habitat inventory of traditional orchards, mapping and surveying to assess their condition. Through this work we have discovered that 90% of traditional orchards have been lost since the 1950s. Furthermore, nearly half of the remaining orchards surveyed were found to be in declining condition as a habitat, further threatening the species that orchards support.

A very old and ailing tree still producing a little crop (PTES)

When trees reach a certain age, they develop cavities and hollows as the heartwood dies and rots or is eaten, pecked, gnawed or otherwise removed over time. In fruit trees this happens at a relatively young age, around 40 or 50 years, but in most tree species it takes centuries. Due to woodland management, harvesting, development, and health and safety only a very few trees make it to the veteran stage. Ancient trees are normally found in wood pasture and parklands, but they are far and few between, whereas orchard trees, although not ancient by comparison, contain all the crucial veteran characteristics that make them such an astonishingly valuable habitat.

The most common reason for an orchard to be considered in decline is lack of replacement replanting. Orchards are a man-made habitat, and with the relatively short life span of fruit trees, even if they survive the changing winds of modern agriculture and garden-grabbing development, if no replanting is done, these old orchards will quickly disappear.

Community orchards

One major area of traditional orchard resurrection is the proliferation of community orchards. They're a relatively recent phenomenon, kick-started in the 1990s by Common Ground. They come about in several ways, most often as a neighbourhood initiative, but can be part of an allotment, school, healthcare centre, or restoration project, and are becoming the de facto greenspace in development applications. Many of these are new plantations, but where the opportunity arises, communities have taken on old forgotten orchards and restored them to their former glory. Restoring the remaining trees and planting new trees in gaps will provide continuity of habitat – crucial to many slow to establish species.

Apple day events often involve making apple juice (Abundance London)

Anyone wishing to set up a community orchard would do well to start with a copy of the Common Ground Community Orchard Handbook. But once you're in possession of the land, the management is up to you. Restoration of old trees can take some planning and needs to be done over a number of years. Here are a few pointers.

Management of veteran trees

The old trees are key to biodiversity, so their retention and preservation is imperative. They give an orchard a sense of place that can be lacking in a new plantation. There is a tendency of land managers towards over-tidiness, and it takes a certain type to consider a rotting old stump with a scraggy wind-blown toupée of growth as beautiful. But these senescent relicts hold the seeds to future biodiversity, not only in the deadwood habitat above ground, but in the fungal associations below.

There's little that can be done to revive a tree that is near the end of its natural life but gentle pruning can allow it to see its days out productively. When dealing with a tall tree, remove the highest parts so low growth can flourish. This has the dual benefits of reducing the chance of catastrophic mechanical failure or wind-

throw and making it safe for people to work around it and gather a harvest. If in doubt, prop limbs up and put a temporary fence around the perimeter of the crown.

Restoring neglected trees

Apple and pear trees need to be pruned for the best results. Their natural tendency is a more bushy structure that produces lots of small fruits. In evolutionary terms this would lead to more seeds so increasing its dispersal opportunities. For our purposes, we want full sized clean fruit that is easy to harvest so we have to engineer growth to our desired shape. Unmanaged trees will have reverted to type, with lots of intertwining and crossing branches and a preference for top growth which shades out and eventually kills lower branches.

Before

Major restoration work is best done in winter, but a vigorous healthy tree can be quite heavily pruned in the late summer with little risk to its health. A rule of thumb is to not remove more than a third of the living crown in any one year. Start by reducing the length of the highest branches, or any that look likely to break imminently. In the first year this may be the only cut you make. The 'dead, damaged and diseased' rule as applied to arboricultural work is not quite right for veteran trees. The exposed canopy deadwood is an important habitat for lots of wood-boring insects and their predators, so don't be too hasty to cut it all out. You might even want to ring bark some branches and use coronet cuts (several angled 'v' cuts at the end of a branch) to artificially introduce veteran features.

After - These Bramley's Seedlings had been heavily reduced some years ago then allowed to overgrow again. The restoration involved removing most of the clutter of growth. This probably breaks rule number one – never more than a third – but we know Bramley's are tough vigorous trees so wasn't too worried. (PTES)

During works, always keep an eye on the tree's balance. Removing a large bough will change the centre of gravity, so either cut evenly on either side, or consider using a cut branch to make a sturdy prop.

New planting

Replanting with trees on vigorous rootstocks is critical to continuity of habitat. New trees shouldn't be planted directly in the same spot as a recently removed tree of the same species. Either leave the soil fallow for a few years, or replace some of the topsoil. This reduces the chances of replant disease, although it's quite poorly understood and occurs inconsistently. Or you could instead plant stone fruit (cherries, plums etc.) in place of pip fruit (apples, pears etc.) and vice versa to avoid the risk.

Sward management

Finally, don't neglect the ground. Removal of arisings after cutting will stop a build-up of nutrients and broaden the species mix. The more diverse the ground flora the more different types of insect will be attracted. Very few community orchards are grazed, so tailor the mowing regime to include a few frequently cut pathways, a percentage of uncut low scrub but a majority cut once or twice a year, generally done midsummer after the annuals have seeded and again just before harvest. Rotate the different areas so no one part becomes permanent scrub or pathway.

There's lots more detail about all of the above on the PTES.org/orchards website, including video tutorials, bibliography and downloads. There is also a map with around 850 community orchards listed. Tell us about yours to get it included.

Ash Dieback – the threat to our non-woodland trees

Jon Stokes, The Tree Council

For over 40 years The Tree Council has campaigned for non-woodland trees, and particularly hedge trees, with the help of its 8,000 Tree Wardens and more than 150 member organisations.

Trees are vulnerable to many different threats which is why we need an ongoing national strategic approach to monitoring, caring and safeguarding trees if we are to continue to benefit from them. One of these threats is the arrival of Ash Dieback which has increased the risks to the UK's non-woodland treescape in a way not seen since Dutch Elm Disease in the 1960's and 1970's.

Ash landscapes - The Cotswolds (Tree Council)

Ash Dieback is caused by a fungus called *Hymenoscyphus fraxineus* [synonym – *Hymenoscyphus pseudoalbidus* (anamorph - *Chalara fraxinea*)] that arrived from Asia into Europe during the 1990's. This invasive fungus causes the death or dieback of *Fraxinus excelsior* trees and other *Fraxinus* species. For simplicity, this article will refer to Ash Dieback.

Ash Dieback was first recognized in the UK in 2012.

The late Professor Oliver Rackham, in his book 'The Ash Tree' (Footnote 1) states, 'There are nearly as many ash trees in Britain as there are people', to then reflect, '*…but what does that statement mean? Like most statistics, it is hedged about with problems of definition (how big does a little ash tree have to get before it is counted?)*'.

Having reviewed the available data, The Tree Council suggests that there are 27.2 – 60 million ash trees in non-woodland situations (greater than 4cm diameter at breast height DBH) compared to 125.9 million in British woodlands with an area larger than 0.5 ha, with potentially 2 billion saplings and seedlings in woodlands and non-woodland situations in the UK.

Research suggests that in hedges, large trees matter for their structural presence, microclimate, shelter and shade, as well as individual species providing a specific food source. It is important simply that a mature tree should exist (except for some lichen communities where ash is the favoured host). As ash is the most

common hedgerow tree, many of which are mature, wide-scale loss of ash will severely impact the ecological value of the UK's landscape.

The potential loss of so many trees in a wide range of habitats means landscape changes at both the macro and micro level. From individual gardens or streetscapes, to the loss of swathes of hedgerow trees or small copses, the impact of the disease will be visible. Non-woodland ash, as hedgerow trees or parkland, are referenced as the defining feature of the landscape in 40% of the 159 local Natural Character Area descriptions of England (Footnote 2).

Ash Dieback affecting young hedgerow tree (Tree Council)

In 2014 The Tree Council was asked by Defra to 'investigate non-woodland ash numbers and the potential impacts that may occur as a result of the spread of Chalara / Ash Dieback'. We have been working closely with Fera (the Food and Environment Research Agency) during this work.

Over the last few years we have organised over 30 specific non-woodland ash meetings attended by over 300 specialist tree professionals. We have also tapped into our parish and community group volunteers by organising another 30 plus events for Tree Wardens.

In addition, key staff from our 150+ Tree Council member organisations have been involved in our work. Finally, we have been working closely with many local authorities across the country developing good practice and case studies.

Ash trees shedding branches and increasing health and safety risks (Tree Council)

Our research suggests that the decline or die back of large numbers of non-woodland ash trees poses a number of risks particularly health and safety issues arising from trees by road, rail and in public spaces. In addition, the risk of flooding is increased through changes to the landscape, alongside the loss of biodiversity.

Back in 2015, we recommended the development of 'Local Action Plans' as a joined up nationwide response in preparing for the impacts of Ash Dieback (Footnote 3). Now we are working on a 'Toolkit' to support the development of these Local Action Plans. The Toolkit will be available from The Tree Council in the early part of 2018 and available on our website https://www.treecouncil.org.uk for all to use.

But there are many other threats to Britain's non-woodland trees, besides Ash Dieback. Some of these we have lived with for decades such as Dutch elm disease which still threatens those elms that become large enough for the *Scolytus* Elm Bark beetles to colonise the tree and carry the fungus to a new host. Other, newer, threats such as Asian Longhorn Beetle (Footnote 4) or Sweet Chestnut Blight (Footnote 5) need control measures and vigilance to ensure that they are contained, neutralised and do not spread.

However, there is a long list of pests and diseases that are currently not found in the UK and which we need to ensure do not reach our shores. For example, the bacteria *Xylella fastidiosa* which damages and kills a wide range of trees and shrubs. For details on all tree pests - see the UK's Plant Health Risk Register at https://secure.fera.defra.gov.uk/phiw/riskRegister/).

All sectors and individuals with a common interest in trees need to work together strategically, to ensure new pests and diseases do not take a foot hold and devastate our non-woodland tree stock any further.

The Tree Council is a unique nationwide umbrella organisation that brings together professional tree specialists through our member networks, and volunteers, through our Tree Warden networks. During our annual Tree Care Campaign, we encourage the need for better care for all trees. We actively support the work of our members, including our Tree Warden Networks, by raising awareness of pests and disease. Working with these and in consultation with others, we are now close to supporting the development of Local Action Plans through completing a Toolkit to evaluate, monitor and manage the response to Ash Dieback. The value of our parish and community volunteers cannot be overestimated. For example, it was a Norfolk Tree Warden who first spotted and reported Ash Dieback in the wild in 2012.

Signs of ash dieback in the twigs
(Tree Council)

It is increasingly important that everyone involved with trees is well informed of the symptoms of tree diseases and is constantly vigilant, reporting anything suspicious to the Forestry Commission using their Tree Alert webpage (https://treealert.forestry.gov.uk).

The future for Britain's non-woodland trees depends on this generation valuing them for their contribution to our environment, to our wellbeing and to the continuing landscape of our country. But this future can only be secured through a fundamental re-evaluation of all the practices and policies used to create and manage a landscape with non-woodland trees in it. Through working with others and bringing together knowledge and insights across sectors, The Tree Council is playing a crucial role to ensure we act now.

Footnotes:

1 The Ash Tree, by Professor Oliver Rackham (Paperback Monographs 2014)
2 National Character Area Profiles: data for local decision making, part of Biodiversity and ecosystems and Landscape, by Natural England (30 September, 2014)
3 The Tree Council 'Chalara and Non-Woodland Trees' Report (Forestry Commission, 2015). Available: http://c-js.co.uk/2yByhvw
4 Asian Longhorn Beetle is a serious tree pest which when found in Kent recently resulted in the removal of 2,166 trees to stop its spread.
5 Sweet Chestnut Blight is a fungal disease that can kill the tree and was recently discovered in London, Kent and Devon.

Forest Gardening In Practice, An illustrated Practical Guide for Homes, Communities & Enterprises by Tomas Remiarz. Forest gardens are "edible ecosystems" combining trees and shrubs with herbs, flowers and vegetables. Forest gardens appear in urban and rural sites, households, communities and public parks, schools and colleges. Features a step-by-step guide to creating your own edible ecosystem. http://c-js.co.uk/2yOzFiP

CCFG's main purpose is to promote the creation, development and management of species rich, structurally varied, biologically diverse and attractive woodlands. We aim to ensure profitable management through the production of high quality timber according to the principles of continuous cover management. For more information visit www.ccfg.org.uk or email administrator@ccfg.org.uk

South Yorkshire Econet, for over 25 years at the leading edge of woodland heritage work, organises conferences and workshops; publishes a wide-range of material; and carries out surveys with local communities. We have extensive experience of HLF projects and in specialist areas. For more information see www.ukeconet.org or email info@hallamec.plus.com

Recently released research describes how trees use environmental extremes to trigger the differentiation of the canopy that literally designs the tree to be pruned (by wind). Understand that process and you will understand how to specify and perform Reduction Via Thinning (Simulated Wind Pruning For Trees). See www.TreeMorphogenesis.com. Vincat Arborem.

If you have a tree problem and don't know where to start, send an image to david@treeadvice.com describe the problem and we will give you a free brief assessment. We will tell you what the problem is or define a process to help get to the bottom of the issue.

www.conservationevidence.com is a free resource helping you access the science behind interventions you might use in forestry and conservation. Does it work to save species? Give us a click and find out!

Managing ancient woodland and how that differs to managing other woodland

By Martin Hügi, Ancient Woodland Restoration Project Manager

Ancient woodland: Scarce, beautiful and irreplaceable. (Phil Formby/WTML)

Woodlands are defined as ancient if the area has been continuously wooded since 1600 in England and Wales, and 1750 in Scotland. This continuity of canopy cover means that the soils are relatively undisturbed when compared to surrounding land.

Ancient woodlands are relatively scarce and are home to complex and interdependent plant and animal communities that have developed over centuries and require these unique conditions. They often also contain archaeological features that have been lost in the wider landscape. For this reason ancient woodlands are irreplaceable and care should be taken when planning and undertaking work within them.

All woodlands are different, including non-ancient woodland planted more recently; tree species, stock and ages, owner objectives, access and topology, soils, markets, pests and diseases and so on, all will have a bearing on how to approach management. It is therefore recommended, for all woodland, to have a management plan.

If woodland is ancient then extra care should be taken to carry out a detailed survey, looking down as well as up! This helps identify and map unique and vulnerable features so that they can be protected during management operations. Features could include areas of ancient woodland specialist flora; large deadwood, standing and fallen, ancient and veteran trees, and archaeology such as woodbanks, sawpits and ditches.

Any work should be managed carefully, particularly that involving heavy machinery. (Jim Smith-Wright/WTML)

Importantly one must always keep in mind that the soils are in, and of themselves, one of the fundamental features of ancient woodland. They underpin the biodiversity and must be protected. Works within ancient woodland should be planned and carried out to prevent unnecessary, excessive and irreversible damage to these soils.

Where ancient and veteran trees exist within and on the edge of woodlands they should be given special attention, the niche habitats within these trees are unique and can be sensitive to rapid changes in their local environment. It does not mean that management cannot take place around or near to such trees; it just means that the work should be carefully planned and perhaps phased. It is a good idea to ensure that the area around them is not opened up too quickly, and that the root zones are protected from compaction. Ancient and veteran trees provide a historic, cultural and genetic link to the past and are a great asset within the wooded landscape.

The Woodland Trust can offer advice and support for anyone interested in ancient woodland restoration. (Jim Smith-Wright/WTML)

In some regions of the country, where there are high uncontrolled deer populations, woodlands and in particular ancient woodlands, with their vulnerable and specialist flora can be threatened by excessive browsing.

Where they are known to be present a deer impact assessment should be undertaken and steps taken to reduce the deer population. Effective management of ancient woodland is impossible if there is a moderate to high population of deer in the vicinity. They can quickly undo any positive management, severely affecting the biodiversity of the woodland and preventing any natural regeneration of trees.

If control of the population is impossible, or challenging, then they will need to be excluded, but this should only be seen as a temporary measure as exclusion can be difficult to maintain. The Deer Initiative is a good source of information and advice on deer assessment and management www.thedeerinitiative.co.uk.

The overriding principle with management of ancient woodlands is to adopt a precautionary approach, ensuring that a comprehensive survey is undertaken and management works carefully planned and undertaken.

More information and advice can be found at www.woodlandtrust.org.uk and in some priority areas funding is available to provide ancient woodland owners with a free woodland survey and assessment.

Forestry education and learning - building your career

Education and learning are the crucial building blocks to any successful forestry or countryside career.

In an increasingly computer-based world, forestry is one of the last remaining professions where at all career levels, both a practical and a theoretical understanding hold equal importance and both are often a necessity.

Arboriculture in Action
(Royal Forestry Society)

As an expanding UK wide sector, forestry offers one of the most exciting and diverse career opportunities out there, covering everything from ecological surveying & GIS, mechanical engineering and drone operatives, to robotics R&D, civil engineering and woodland establishment specialists.

Careers in forestry have entry routes at all educational levels, from school leavers/FE, apprenticeships (trailblazer scheme) to Bachelors, Masters degrees and beyond.

Increasingly the forestry and arb sectors are attracting professionals from many other fields as career transitions. This is due, in part, to the flexibility and resilience of UK forestry and an increased understanding that forestry investment and better management now can help bring about financial stability for the forestry sector as well as carbon sequestration and other environmental and societal benefits in the long run.

The Royal Forestry Society (RFS) supports the forestry and arboriculture sectors at all levels, with a suite of theoretical qualifications, short field based training courses covering topics such as mensuration and tree ID, 80+ unique woodland visits a year providing a wealth of opportunity for informal CPD and a supporting online woodland management resource ‘the knowledge hub’. The highly regarded Quarterly Journal of Forestry is published and sent to members four times a year, this includes scientific reports, articles and case studies from across the forestry world as well as the latest news and developments. The most recent Journal (Vol. 111, No.4) has guest articles covering the creation of forestry inventory methods in Hungary, a study into White Elm species suitability in the UK and a feature on the fate of an amenity woodland planting post establishment.

RFS intern Francis Hepburne Scott checking tree rings match existing stand data at Hockeridge
(Royal Forestry Society)

The “RFS/ABC Level 2 in Arboriculture” is the flagship course, popular with a wide demographic, from those wishing to transition to the sector and gain a better understanding of tree biology, to operational personnel upskilling themselves and to new woodland owners increasing their understanding of their trees and woods.

Designed to be a comprehensive introduction to forestry, trees and the wider industry, the RFS/ABC Level 2 has a wide choice of modules to study, from ‘Tree inspections and Statute and Common Law Applied to Trees’ to ‘Silviculture’ and ‘Principles of Woodlands, Forestry and Ecology’.

During 2018, the RFS intends to increase its qualifications portfolio with an RFS accredited distance learning short course in partnership with the Horticultural Correspondence College, designed to incorporate the main points of woodland management and introduce the user to woodland terms and principles that they will be able to use day to day. We are anticipating this will be popular amongst new woodland owners and people with an interest in forests and woodland at a non-professional level.

In one form or another, RFS Certification has been present in the industry for 100 years and is recognised as a sign of practical excellence. Regularly updated to reflect best practice, RFS Certification remains as relevant today as it was when first introduced.

There has been an increase of around 15% uptake in forestry graduate qualifications in the past 30 years (Eurostat, 2010). However, for many reasons, not everyone in the sector that wishes to further their career will want to potentially take time off of work and attend university for accreditation.

500th Cert Arb presented to Northern Ireland's Laurence Christie
(Royal Forestry Society)

The Royal Forestry Society offers another route for professional Certification in Forestry and Arboriculture. Designed to recognise the practical qualifications and ongoing training at all levels in forestry, the **RFS Certification in Forestry/Arboriculture (RFS Cert. For, RFS Cert. Arb)** is a post-nominal award that is attained by submitting a portfolio of supporting theory and practical qualifications.

To currently qualify for the certification, you must hold a combination of 8 practical forestry/arb modules, including 4 compulsories (CS30/31 & Woodchipper) and a recognised Level 2 or higher theory qualification in forestry or arboriculture. As an equivalency standard, we benchmark the theoretical requirement from our own Level 2 in arboriculture.

In short, there are 5 key points to being successful in achieving in your dream forestry or arboriculture career.

- theoretical understanding
- practical ability/understanding
- a love of the outdoors
- continuing development and membership of professional bodies (RFS, ICF, Confor)
- and a driving licence!

Getting your career to where you want it to be can be a challenging journey. Perseverance, commitment, passion and engagement with the sector and its people will be your key tools.

The RFS, on behalf of the sector, hosts the online “Forestry Careers Guide”. http://www.rfs.org.uk/forestry-careers/ Follow the link to view videos and information explaining the different entry routes into the sector, tips on careers, links to places to study, information on bursaries and internships and much more, the guide is updated regularly with course information and developments in the industry.

Adam Todd, RFS Future Foresters Officer
(Royal Forestry Society)

About the author

Adam Todd is the Royal Forestry Society’s Future Foresters Project Officer. He takes the lead on a number of its ground breaking projects, delivering educational outreach to FE and HE students as well as managing the online Forestry and Arboriculture Careers Guide hosted by RFS, on behalf of the Forestry Learning and Development Working Group.
Adam manages the RFS suite of student bursaries and awards as well as revising and managing the popular RFS Certification scheme. He holds a BSc(Hons) in Forest and Woodland Management from the National School of Forestry of Cumbria, has an interest in resilience and forest pest control and is a qualified arborist. adam.todd@rfs.org.uk

The Heart of England Hedge Laying Group provides training for individuals, groups and organisations. The training offered extends from basic experience of the craft through to advanced level. Duration from one day experience and improvers to more extended introduction and skills development courses. www.hoehlg.co.uk

Small Woods Association Training Pathway 2018
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www.smallwoods.org.uk email: richardthomason@smallwoods.org.uk 01952 432769

We run forestry courses throughout the year, upcoming Practical Woodland Management is on Saturday 3 and Sunday 4 March 2018, 10am to 4pm- learn to fell small trees safely and find suitable uses for the timber cost is £78, £70 (Gold Card) or £39 (concessions). To book call Derbyshire Eco Centre 01629 533038

Training providers to the land based sector and specialists in forestry, woodland management and woodfuel supply chain training, including the Lantra Awards accredited Ignite courses. Material is constantly revised to take account of the latest technical and legislative developments. For more details of our courses, contact: 01765 609355
erica.spencer@ruraldevelopment.org.uk
www.ruraldevelopment.org.uk/events

Level 3 - Advanced Technical Certificate in Arboriculture. This course includes a large amount of practical and theory work giving students the opportunity and confidence to develop the core practical skills and knowledge for employment or further learning and training in woodland management, professional tree care and allied industries.
http://c-js.co.uk/2ArR8KR

Phil Dunford Chainsaw Training. Chainsaw courses for professional and occasional users leading to nationally recognised accreditation. Competitive prices for expert training by a previous British felling champion. www.chainsawtraining.com email phil@chainsawtraining.com tel 01490 460611or find us on Facebook

Our short courses in Arboriculture include Chainsaw Maintenance and Cross-cutting, Felling and Processing Trees, Climbing and Aerial Rescue, Aerial Cutting and Tree Inspection. Titles also available: Brushcutter, Powered Pole Pruner and Woodchipper. Courses run throughout the year. For details contact Michelle on 01245 424287, email michelle.williams@writtle.ac.uk or visit www.writtle.ac.uk/shortcourses

Woodland Skills Centre is in north-east Wales with easy access from the motorway network and runs a wide range of courses in traditional and countryside crafts, woodland management, bushcraft and family holidays with free camping. The site has 50 acres of woodland, timber-frame buildings, workshops, orchard and vineyard. www.woodlandskillscentre.uk

We are a training organisation and have been trading for 35 years. We provide training in all aspects of Forestry & Arboriculture. We can either carry out the training at one of our sites or your site.
Contact us at: info@chainsawcoursessouthwest.co.uk or by phone on 07836 594404

Cumbria Woodlands offer courses in Chainsaw use, Woodland Management, Bats and Trees, Outdoor First Aid and Tool Sharpening. Full details from the Courses & Events page at www.cumbriawoodlands.co.uk

Level 2 - Technical Certificate in Forestry & Arboriculture at Kingston Maurward College
An ideal way to start in the tree industry this new qualification is a blend of theory and practical sessions which will build on your love of the outdoors. Learn a wide range of arboriculture skills.
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Lowe Maintenance offer high quality courses at affordable prices within Forestry and Landbased sectors, covering: Arboriculture, Tree climbing and Forestry Chainsaw related qualifications; Pesticide/Spraying; First Aid; ATV's; Brushcutter/Trimmer; Hedge Cutter and many other short courses within Horticulture, Agriculture and Countryside skills, leading to nationally recognised qualifications (e.g. City and Guilds). info@lowe-maintenance.co.uk 01729 825132 www.lowe-maintenance.co.uk

Forestry – a fascinating topic and a hugely rewarding career

By Dr James Walmsley, Senior Lecturer in Forestry

A love for trees and forests is almost universal and the fact that most people cannot tell you the difference between an oak and an ash does not detract from their widespread appreciation and enjoyment. Yet relatively few people consider going to university to study forestry, or conceive of the idea that one day, somehow they might actually get paid for the privilege of working for the protection, management and stewardship of trees and forests. This short article attempts to explain some of the roles available in commercial forestry and arboricultural work. Forestry alone is estimated to employ over 43,000 people in the UK and hence there is an incredibly diverse range of roles.

There is no doubt that the landscape impacts of conifer forests are a point of contention for many. But why were they planted in the first place? Did those who planted them really make a mistake, or were there in fact very good reasons for creating them? (Dr James Walmsley)

Commercial forestry includes roles that relate to the management of a forest or forests in order to provide an economic return for an investor (such as a pension fund), a private estate or an individual. Income has traditionally come from the sale of timber and, in a number of private forests, shooting. A number of large private forests also lease areas for wind turbines, deriving a useful rental income. Sports such as mountain biking, rally events, dirt bikes, orienteering, triathlons, horse riding and Segway are increasingly popular and can provide additional income and opportunities for commercial forests, as well as the harvesting of more obscure resources such as moss (for floristry), mushrooms and material for Christmas wreaths.

The production of high quality timber requires planning over long timescales (several decades or more) and demands that trees are managed carefully throughout their lifetime, including activities such as 'beating up' (replacing planted trees that have died), pruning / brashing (to try and improve the quality of individual trees), thinning (for example, to reduce the total number of trees and favour those of the highest quality), perhaps on several occasions.

Entry into commercial forestry typically starts with an 'assistant manager' role, whereby the assistant will provide support to a more experienced forest manager. Essential skills and qualities generally include a driving licence, high level of self-organisation, awareness of environmental, health and safety legislation, commercial acumen and numeracy. Forestry specific knowledge and expertise is also essential, including an understanding of forest operations, GIS, planning (including management planning), silviculture, forest ecology, soils, common tree species and diseases, and

Want to create an oak forest? Well, one option is to collect acorns, propagate them in a nursery, and then plant them. But acorns from where? And how can you ensure they germinate? forestry@bangor students learn how to answer these questions, and many more! (Dr James Walmsley)

timber markets. Excellent communication skills are absolutely vital. Applicants are often expected to be working towards achieving Chartered Forester[1] status. It's important to note that such roles exist in both the private and public sectors, but that the focus of these roles can vary considerably.

Commercial forestry is not solely limited to work 'in the forest' – for example there are also a number of private forest nurseries that supply tree seedlings. A single nursery may supply 10 or 15 million seedlings per year! And at the other end of the tree life cycle, there are sawmills which process logs into a huge range of different products.

Arboriculture is concerned with the cultivation, study and management of individual trees and, like forestry, spans a wide range of different roles. Forestry and arboriculture are closely related in that they both focus on trees, but there are some major differences, perhaps the greatest being that of scale – forestry involves managing large areas of trees, whereas arboriculture is concerned much more with individual or very small groups of trees.

The trees of interest to arboriculturalists are typically located in built up areas, in or around private or public gardens, or in areas where they present a potential existing or future hazard, such as those growing beneath or near power lines, or alongside roads, railways or other key infrastructure. They may also be 'special' trees which are recognised for their cultural, historic, aesthetic and / or other values, and may have a Tree Protection Order placed on them, thereby affording them a higher level of protection from human interventions.

Giant redwood, *Sequoiadendron giganteum*. This tree might look like a giant, but at ~80 years old and 40 metres tall, it is in fact just a youngster! These trees live for several hundreds of years and are native to north-west USA. (Dr James Walmsley)

Unlike foresters, who typically do not leave the ground, arborists (or tree surgeons) are trained to ascend trees using specialist climbing and chainsaw equipment and / or the use of mobile elevated work platforms (MEWPs), to enable them to access tree canopies safely and perform operations accurately.

Arboriculture is essentially a service, whereby tree management is often carried out due to safety or tree health concerns. Timber and wood is produced as a by-product of this service, compared to forestry, where timber is often (although not always) produced with a particular end-market in mind.

Arboriculture spans a wide range of roles and opportunities. Large private arboricultural businesses help organisations responsible for railways, roads and power distribution to maintain their tree resources, which in many cases can be considerable and extend to thousands of hectares. Smaller businesses might consist of just one or a few members of staff, which focus on managing trees for private landowners, but they may also get involved in the management of trees alongside roads and other infrastructure.

MSc students worked closely with various agencies on a study tour to complete important invasive species monitoring and condition assessment in an ancient woodland in north Wales. (Dr James Walmsley)

Essential skills and qualities for arborists include knowledge of tree biology, identification and disease, hazard and risk assessment, health, safety and environmental legislation, numeracy, and the ability to use specialist equipment, such as climbing gear / MEWPs, mapping technology and tree processing machinery. They also need to have excellent communication skills in order to liaise with a wide range of stakeholders, or to be able to explain clearly to members of the public or landowners the implications of not safely managing individual trees. The ability to negotiate is also a huge asset, for example, to enable access to specific sites or to arrange road closures to ensure safe working.

MSc Forestry (distance learning) – a route into the forestry profession

Our distance learning MSc Forestry[2] students include those who are already working full-time for organisations including the National Trust, Forestry Commission England and Scotland, Wildlife Trusts, private forest management companies, certification bodies and other public, private and charitable organisations. But we also have students from a wide range of other backgrounds, including building service engineers, bankers, travel agents, house-husbands and semi-retired folk who are simply passionate about forestry and thirsty for a challenge! One of the major advantages of being able to study via distance learning is, of course, the ability to keep on working at the same time, hugely reducing the financial commitment and income foregone that is involved with a year of full-time study. Career change, career development, gaining Chartered Forester status or simply gaining a formal qualification are all common motivations for registering for the distance learning programme.

What goes without saying is that the degree alone does not secure interesting or relevant employment. Successful graduates are those that have taken their studies seriously and used them as a foundation on which to develop their own area of expertise, undertake relevant voluntary experience or internships, develop their professional network through engagement with the ICF, RFS and other organisations, go on to successful careers. It is not unusual for graduates of these programmes to become 'experts' in a particular topic by the time they graduate. For example, one of our very recent graduates from the MSc Forestry (distance learning) programme is now a leading UK and European expert on the 'Wild Service Tree' (*Sorbus torminalis*), simply as a result of him challenging his interest through the formal MSc dissertation process. He is now also working for the National Trust as a Woodland Manager. All the more impressive when you consider that just over three years ago, he was a building services engineer with no forestry experience!

Further reading:

Royal Forestry Society (2016) The difference between arboriculture and forestry, available from http://c-js.co.uk/2zJKIME accessed October 2017

Links

1 http://www.charteredforesters.org/
2 http://c-js.co.uk/2z39Uvk

Amelia Williams, Tree Officer for Test Valley Borough Council – a typical day in my life.

So if you are passionate about trees, then the most natural choice would be to work with them, as I do. The best part of my job as a Tree Officer is being able to spend time outdoors surrounded by nature as well as engaging with local communities.

Failed oak limb hanging over a car port in North Baddesley (Amelia Williams)

Here are a few highlights from my typical day…

I work for Test Valley Borough Council in the beautiful heart of Hampshire. My day usually starts around 8.30am at the main Council Offices in Andover, around 20 minutes from my home. From there anything can occur to change my plans for the day, often before I even get to work! This can be because of storm conditions causing an emergency call out or reacting to multiple reactive Customer enquiries.

A lot of my time is spent out and about in the Borough, which is around 50 miles long and 15 miles wide. It is assessing approximately 30,000 Council owned trees, groups and woodlands but not all in one day and for every hour of site time comes equivalent office time.

I have mobile working though which enables me to grab my mobile phone and tablet with Ezytreev on it and go straight to site to assess whatever tree issue has come in.

I can respond directly to our customers in a whole range of ways via e-mail, through the Council app, via text, phone or face to face. These site visits may be reactive or planned and I need to remain flexible to switch from one to the other at all times.

As a Tree Officer, every day is different, every tree is different, every enquiry is different but the themes are similar. Overhanging branches, dangerous tree, fallen trees, lack of light, too tall, too close but whatever the issue, my role is to assess the issue and deal with it professionally, efficiently and effectively. It may be an insurance claim, nuisance, perception of danger or actual damage that I have to investigate.

Screen shot from Ezytreev tree management database of the War Memorial Park in Romsey (Amelia Williams)

I get around 3 enquiries a day relating to trees too and a site visit is usually required for each one. So, one of the most important aspects of the role is you must like people, not just trees. Not everyone will share your passion for trees, but if you can understand people's issues with them you can determine the fate of trees in the long term. I see it as an opportunity to inspire others and share my knowledge and enthusiasm for trees with other people.

My daily role includes surveying or re-surveying all the trees on Council owned land and that works out at around 26 trees per day. This entails checking for constraints, confirming landownership, making TPO applications to felling licences prior to ordering tree works and managing tree works budgets as well as putting up public notices, writing to residents and notifying the local Councillors of tree works.

I carry out site checks of completed tree works and check work in progress by our tree contractors for compliance and assess completed tree works. So it is important to have a detailed understanding of tree law, health and safety and planning legislation.
The job also includes drawing up replacement tree planting and providing guidance on tree related projects including BS5837 surveys, plus creating and updating guidance for the public on general tree information for the website and creating a tree policy.

Beech tree under health monitoring in a Churchyard in Shipton Bellinger
(Amelia Williams)

My day can be like a rollercoaster - very rewarding one minute to very frustrating the next. From seeing good standards of tree work being carried out, meeting new customers and sharing information on trees to frustration and emotions from people objecting to decisions about tree works or who feel upset at the way tree works were carried out.

It is not easy to please everyone and you need to appreciate that not all your decisions will be welcomed positively but that should not deter you from making sound arboricultural decisions.

It is part of my role to engage and listen to residents and local stakeholders and allow them to be part of the decision making process whether it is through consultation or notification just keeping them informed of forth coming tree works, so diplomacy and good communication skills are a must on a daily basis. You will liaise with so many interested parties whether it is a resident, Councillor, Business, or another professional body.

Site inspection of our tree contractor Gristwood & Toms during tree works in Vigo Recreation grounds
(Amelia Williams)

I always try and see each interaction as an opportunity whether it is dealing with a customer complaint or compliment, general enquiry or project.

There are many aspects to a Tree Officer role in Local Government. Whilst mine is focused on managing Council owned trees which in itself is a diverse and wide-ranging role, there are other elements to the role including Tree Preservation Order (TPO) applications, Conservation Area notifications, managing TPO's, Planning consultations for trees, illegal felling, high hedge legislation, appeals and much more.

Trees constantly grow, landscapes change and develop and that is what makes the role of a Tree Officer so interesting, diverse, challenging, and complex and at the same time rewarding.

Website: www.testvalley.gov.uk

The CJS Team would like to thank everyone who has contributed adverts, articles and information for this CJS Focus publication.
Next edition will feature Volunteering published on 12 February 2018

A4 sides this CJS Focus: 18 - Details believed correct but given without prejudice, Ends.